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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,864

10/17/2003

Carrie Delcomyn

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SUITE 600
CHARLESTON, WV 25301

EXAMINER

DELCOTTO, GREGORY R

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/687,864	Applicant(s) DELCOMYN ET AL.	
	Examiner Gregory R. Del Cotto	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 4/11/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-56 and 58-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-56 and 58-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 53-56 and 58-82 are pending. Claims 1-52 and 57 have been canceled. Applicant's arguments and amendments filed 4/11/08 have been entered. Note that, it is unclear as to how claim 57 has been canceled since claim 57 did not previously exist.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/11/08 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 53-56, 58-64, 66-78, and 80-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNeil et al (US 5,403,549) in view of Lion et al (US 6,143,088).

McNeil et al teach a method and a composition for disinfecting matter or materials such as medical instruments, operating rooms, examining tables, walls, windows, floors, solutions, porous substances, and the like contaminated with bacterial, bacterial spores, fungi, or viruses. The composition contains a fluid mixture containing a peroxymonosulfate salt and a carbonyl-containing compound and reaction products thereof. The carbonyl containing compound is particularly selected from the group consisting of acetone, 2-pentanone, 4-hydroxy-4-methyl-2-pentanone, etc. Additionally, surfactants may also be used in the compositions. See column 6, lines 10-25. Additionally, McNeil et al teach that the use of a commercially available buffer does not interfere with the activity of the dioxirane containing reaction product. See column 12, lines 50-69. Also, Example 2 states that mixing caroate with a ketone in the presence of a small amount of buffer yielded no bacterial growth which is desirable. See column 11, lines 45-69. Additionally, the compositions may contain at least one compound selected from peroxides, aldehydes, epoxides, and surfactants. See claims 14 and 27. The invention encompasses a disinfectant fluid mixture, that may be a solution or gas or

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a mixture thereof, prepared by mixing various ketones or aldehydes with caroate in an appropriate polar solution or gaseous environment. Preferably, the polar solution is an aqueous solution but can also contain or consist of alcohols, ketones, and the like. See column 8, line 65 to column 9, line 10.

McNeil et al do not teach the use of a bicarbonate or carbonate, a surfactant such as cetyltrimethylammonium chloride, or a method of decontaminating materials contaminated with viruses by using a composition containing a monopersulfate compound, a carbonate or bicarbonate, a ketone, optionally, cetyltrimethylammonium chloride, and optionally, a co-solvent in the specific proportions as recited by the instant claims.

Lion et al a composition for decontamination of materials soiled by toxic agents. The composition further includes a cationic surfactant. See Abstract. Additionally, the compositions may contain buffers which may contain a mixture of bicarbonate and sodium hydrogen carbonate. See column 3, lines 45-55. Suitable surfactants include cetyltrimethylammonium chloride, etc. See column 3, lines 30-40.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use a buffer such as a mixture of bicarbonate and carbonate in the composition taught by McNeil et al, with a reasonable expectation of success, because Lion et al teach the use of carbonate and bicarbonate as a buffer material in a similar disinfecting composition and further, McNeil et al teach the use of buffering agents in general.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use a surfactant such as cetyltrimethylammonium chloride in the composition taught by McNeil et al, with a reasonable expectation of success, because Lion et al teach the use of cetyltrimethylammonium chloride as a surfactant in a similar decontamination composition and further, McNeil et al teach the use of surfactants in general.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made to decontaminate materials contaminated with viruses by using a composition containing a monopersulfate compound, a carbonate or bicarbonate, a ketone, optionally, cetyltrimethylammonium chloride, and optionally, a cosolvent in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teachings of McNeil et al in combination with Lion et al suggest decontaminating materials contaminated with viruses by using a composition containing a monopersulfate compound, a carbonate or bicarbonate, a ketone, optionally, cetyltrimethylammonium chloride, and optionally, a cosolvent in the specific proportions as recited by the instant claims.

Note that, the Examiner asserts that the broad teachings of McNeil et al in combination with Lion et al would suggest compositions having the same pH as recited by the instant claims because McNeil et al in combination with Lion et al suggest compositions containing the same components in the same amounts as recited by the instant claims.

Claims 65 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNeil et al (US 5,403,549) in view of Lion et al (US 6,143,088) as applied to claims 53-56, 58-64, 66-78, and 80-82 above, and further in view of Heffner et al (US 5,437,686).

Heffner teaches bleaching compositions containing an inorganic peroxygen compound and a bicyclic or tricyclic diketone as an activator for the peroxygen compound. The composition preferably comprises about 1 to about 75% of the peroxygen bleaching compound and about 1 to about 75% of the bicyclic or tricyclic diketone bleaching compound activator. The compositions can be formulated as dry concentrated, aqueous solutions, aqueous solutions containing non-aqueous solvents, etc. Note that, the Examiner asserts that aqueous solutions containing non-aqueous solvents would meet the limitation of "water-based" as recited by the instant claims. The compositions are environmentally safe, effective as bleaching agents from below room temperature to higher temperatures, biodegradable and otherwise highly desirable. See Abstract. Highly preferred peroxygen salts include sodium and potassium monopersulfates, etc. See column 3, lines 50-69. Preferred ketones for use a bleach activator include decalin-1, 5-dione, methyl-decalin-1, 6-dione, etc. See column 5, lines 40-60. The bleach activator process is carried out in aqueous solution having a pH of from about 7 to about 12. Since an aqueous solution of the persalts or peracids is generally acidic, it is necessary to maintain the requisite pH conditions by utilizing a buffering agent such as sodium bicarbonate, sodium carbonate, etc. which are the same the "carbonate-type" buffers as recited by the instant claims. These

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buffers are used in amounts from 1 to about 85% by weight of the bleaching compositions. See column 8, lines 25-45. Suitable surfactants include nonionic surfactants such as ethoxylated alcohols wherein the alkanol has 9 to 18 carbon atoms and wherein the number of moles of ethylene oxide is from 3 to 15. See column 8, line 50 to column 9, line 20. Other suitable surfactants include anionic surfactants, amine oxides, etc. See column 11, line 55 to column 12, line 40. Nonaqueous liquid carriers can also be used in the compositions and include propylene glycol, polyethylene glycol, etc. See column 14, lines 55-69.

It would have been obvious to one of ordinary skill in the art to use propylene glycol in the composition taught by McNeil et al, with a reasonable expectation of success, because Heffner et al teach the use of propylene glycol as a nonaqueous carrier/solvent in a similar bleach/disinfectant composition and further, McNeil et al teach embodiments wherein the carrier liquid is based upon solvents such as alcohols in addition to water.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 53-56 and 58-82 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8, 10, 12-14, 21-23, 25-27, 34-36, and 38-40 of copending Application No. 10/693194. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 8, 10, 12-14, 21-23, 25-27, 34-36, and 38-40 of 10/693194 encompass the material limitations of the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition containing a monopersulfate compound, a carbonate-type buffer, ketone, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because claims 8, 10, 12-14, 21-23, 25-27, 34-36, and 38-40 suggest a composition containing a monopersulfate compound, a carbonate-type buffer, ketone, and the other requisite components of the composition in the specific proportions as recited by the instant claims. Note that, a dioxirane compound as recited by claims 8, 10, 12-14, 21-23, 25-27, 34-36, and 38-40 of 10/693194 would suggest a composition containing a persulfate and ketone such as acetone since dioxiranes form from combining a persulfate and ketone such as acetone.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

At the outset, the Examiner would like to point out that upon further consideration, McNeil et al has been applied as a primary reference in rejecting the instant claims under 35 USC 103(a). With respect to McNeil et al, Applicant states that the composition of McNeil et al does not comprise one or more buffers, at least one of which is selected from the group consisting of alkali metal and alkaline earth metal salt forms of bicarbonate and/or carbonate, and McNeil et al has a pH outside of the range of about 5 to about 9 as recited by the instant claims.

In response, note that, the Examiner asserts that McNeil et al do teach compositions which contain buffer in combination with acetone and peroxysulfate and yielded no bacterial growth (Example 2 and Example 4) which provides motivation to use a buffer in combination with the acetone and peroxysulfate. Note that, Example 4 states that a commercially available buffer in combination did not interfere with the activity of the dioxirane reaction product. The fact that McNeil does not teach the same buffers as recited by the instant claims is recognized by the Examiner. However, what is important is that specific teachings contained within McNeil et al stand for the proposition and suggest that buffers are suitable for use in the compositions taught by McNeil and that buffers, in at least some instances, help the antibacterial properties of the composition. The specific carbonate and/or bicarbonate buffers as recited by the instant claims are taught by Lion et al which is discussed below.

Further, the Examiner maintains that Lion et al is drawn to a similar disinfectant/cleaner composition which is analogous prior art, relative to McNeil et al, and that one of ordinary skill in the art clearly would have looked to the teachings of

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Lion et al to cure the deficiencies of McNeil et al. Lion et al is a secondary reference relied upon for its teaching of bicarbonate and carbonate as a buffering material. The Examiner maintains that one of ordinary skill in the art clearly would have been motivated to use a buffer such as a mixture of bicarbonate and carbonate in the composition taught by McNeil et al, with a reasonable expectation of success, because Lion et al teach the use of carbonate and bicarbonate as a buffer material in a similar disinfecting composition and further, McNeil et al teach the use of buffering agents in general.

With respect to the pH of the composition as recited by the instant claims, note that, as stated above, the Examiner asserts that the broad teachings of McNeil et al in combination with Lion et al would suggest compositions having the same pH as recited by the instant claims because McNeil et al in combination with Lion et al suggest compositions containing the same components in the same amounts as recited by the instant claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.

Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory R. Del Cotto/
Primary Examiner, Art Unit 1796

/G. R. D./
June 22, 2008